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09/752,152	12/29/2000	Stephen S. Jackson	2204/A84US	8441
34845	7590 06/23/2006		EXAM	INER
	SS & MANARAS LL	P	PHUNKULH, BOB A	
125 NAGOG PARK ACTON, MA 01720			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)	<u>a</u>
Office Action Summary	09/752,152 Examiner	JACKSON, STEPHEN S.	
-		Art Unit	
The MAILING DATE of this communication app	Bob A. Phunkulh	2616	
Period for Reply	is an are cover street with the c	orrespondence address	
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DATE of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  If NO period for reply is specified above, the maximum statutory period versions to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be timused and will expire SIX (6) MONTHS from a cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).	
Status	•		
1) ☐ Responsive to communication(s) filed on 17 Apr 2a) ☐ This action is FINAL. 2b) ☐ This 3) ☐ Since this application is in condition for allower closed in accordance with the practice under Example 2.	action is non-final. nce except for formal matters, pro		
Disposition of Claims			
4) ☐ Claim(s) <u>1-12,14-28,30-42 and 44-47</u> is/are pe 4a) Of the above claim(s) is/are withdraw 5) ☐ Claim(s) is/are allowed.		·	
6)⊠ Claim(s) <u>1-12, 14-28, 30-42, 44-47</u> is/are rejec 7)□ Claim(s) is/are objected to. 8)□ Claim(s) are subject to restriction and/o			• ·
Application Papers			
9) The specification is objected to by the Examine 10) The drawing(s) filed on is/are: a) accomplicant may not request that any objection to the Replacement drawing sheet(s) including the correct 11) The oath or declaration is objected to by the Examine	epted or b) objected to by the fidenaming(s) be held in abeyance. See ion is required if the drawing(s) is obj	e 37 CFR 1.85(a). jected to. See 37 CFR 1.121(d).	
Priority under 35 U.S.C. § 119	·		
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of:  1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the priority documents application from the International Bureau * See the attached detailed Office action for a list	s have been received. s have been received in Applicati rity documents have been receive u (PCT Rule 17.2(a)).	on No ed in this National Stage	
Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal P 6) Other:		

Art Unit: 2616

### **DETAILED ACTION**

This communication is in response to applicant's 04/14/2006

amendment(s)/response(s) in the application of JACKSON for "LOCAL AREA

NETWORK WITH ELECTROCHEMICAL POWER SOURCE" filed 12/29/2000. The amendments/response to the claims have been entered. No claims have been canceled. No claims have been added. Claims 1-12, 14-28, 30-42, 44-47 are now pending.

# Claim Objections

Claims 13, 29, 43 are objected to because of the following informalities: Claims 13, 29, and 43 are cancelled claims (see amendment filed 10/28/2005 and office action mailed 1/11/2006). Therefore, the claims are not considered in this office action.

Appropriate correction is required.

## Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 6-20, 22-35, 37-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Cole* et al. (US 6,348,874), hereinafter *Cole*, in view of *Kamioka* et al. (US 5,990,577), hereinafter *Kamioka*.

Art Unit: 2616

Regarding claims 1, 10-13, *Cole* discloses a central network device (the communication device 12, see figures 1-4) for use in a power integrated local area network, the central network device comprising:

an electric power source (Vs see figure 1 or power supply 16, see figure 3); and a network interface configured to communicate with a plurality of member network devices via a combined power/data link (nodes 20, see figures 1 and 3; and col. 3 lines 45-55) and to deliver power, from energy stored by the electrochemical power source, to at least one selected member network device, the at least one selected member network device, the at least one selected member network device being capable of accepting power over the power integrated local area network (the link 30 is an 10Base-T links are used for supplying power to the remote node, see col. 2 lines 37-46).

Cole fails to explicitly discloses the power source is electrochemical source i.e. battery power source.

Kamioka, on the other hand, discloses a hub for a local area network according to one embodiment of the present invention includes a plurality of communication ports connected to each of nodes in the network, through which a signal is transmitted among the nodes, a signal processing circuit having at least the functions of repeating the signal among the nodes and reshaping a waveform thereof, and a power supply circuit for supplying a dc current for driving the signal processing circuit. The power supply circuit further comprises an ac/dc converter for converting an ac current applied from an external ac power supply without passing through a power switch thereto into a predetermined dc current and supplying the dc current to a load circuit including the

Art Unit: 2616

signal processing circuit without passing through a power switch, <u>a backup secondary</u>

<u>battery</u>, <u>a charging circuit for trickle charging the dc current output from the ac/dc</u>

<u>converter into the backup secondary battery</u>, <u>and a control circuit for opening and</u>

<u>closing a current path for supplying an output current of the backup secondary battery to</u>

<u>the load circuit</u> (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made supply the teaching of *Kamioka* especially backup battery power supply in the system taught by *Cole* for providing a hub equipped with a backup power supply function using a secondary battery which becomes activated immediately after the hub is connected to a network system such as a LAN; and providing the hub which is able to avoid breakdown of a whole network system in case of power failure or a defect caused in a power supply wiring without using an expensive uninterruptible power supply facility

Regarding claim 2, *Cole* discloses the power integrated local area network is configured to execute the Ethernet protocol (see col. 2 lines 37-44).

Regarding claim 3, *Cole* discloses networking logic chosen from the group consisting of a switch, a hub, a router, and a multiplexer (see col. 3 lines 12-23).

Regarding claim 4, *Cole* discloses the power integrated local area network is configured to operate according to a Power Ethernet Standard (see col. 2 lines 37-44).

Art Unit: 2616

Regarding claim 6, *Cole* discloses a housing shared by the electrochemical power source and the network interface (see figure 3).

Regarding claim 7, *Cole* discloses power rectification circuitry (Voltage regulator 14 in figure 2 or Power supply 16 in figure 3, see col. 3 lines 39-55).

Regarding claim 8-9, *Cole* inherently discloses the central network device further comprising an AC to DC converter or DC to AC converter (see col. 2 line 65 to col. 3 line 5).

Regarding claim 14, *Cole* discloses the plurality of member network devices comprises a network appliance (see col. 3 lines 5-11).

Regarding claim 15, *Cole* discloses a central network device, wherein the network appliance comprises (remote node 20, see figures 1 and 5):

a peripheral device configured to transmit data to the power integrated local area network (see figures 1 and 5);

a communication engine operably coupled with the peripheral device, the communication engine configured to control data transmission via the power integrated local area network; and

Art Unit: 2616

an appliance network interface operably coupled with the communication engine, the appliance network interface being configured to transmit data to and to receive data from the power integrated local area network via the combined power/data link (the communication link 30 is an Ethernet 10Base-T line, see col. 2 lines 36-44, and comprising lines 40, 42, and 44 see figure 1 and col. 2 lines 16-36, wherein the link 30 is used for delivering both data or power to the selected nodes, see col. 2 lines 37-44), data transfer between the peripheral device and the power integrated local area network being forwarded via the appliance network interface (see col. 3 lines 5-11).

Regarding claim 16, *Cole* discloses a power integrated local area network, the network comprising:

a plurality of member network devices (nodes 20, see figures 1 and 3; and col. 3 lines 45-55); and

a central network device configured to communicate with the plurality of member network devices via a plurality of combined power/data links (links 30-34, see figure 2), and to deliver power, from energy stored in an power source, to at least one selected member network device that is capable of accepting power from the central network device (Vs see figure 1 or power supply 16, see figure 3).

Cole fails to explicitly discloses the power source is electrochemical source i.e. battery power source.

Kamioka, on the other hand, discloses a hub for a local area network according to one embodiment of the present invention includes a plurality of communication ports

Page 7

Art Unit: 2616

connected to each of nodes in the network, through which a signal is transmitted among the nodes, a signal processing circuit having at least the functions of repeating the signal among the nodes and reshaping a waveform thereof, and a power supply circuit for supplying a dc current for driving the signal processing circuit. The power supply circuit further comprises an ac/dc converter for converting an ac current applied from an external ac power supply without passing through a power switch thereto into a predetermined dc current and supplying the dc current to a load circuit including the signal processing circuit without passing through a power switch, a backup secondary battery, a charging circuit for trickle charging the dc current output from the ac/dc converter into the backup secondary battery, and a control circuit for opening and closing a current path for supplying an output current of the backup secondary battery to the load circuit (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made supply the teaching of *Kamioka* especially backup battery power supply in the system taught by *Cole* for providing a hub equipped with a backup power supply function using a secondary battery which becomes activated immediately after the hub is connected to a network system such as a LAN; and providing the hub which is able to avoid breakdown of a whole network system in case of power failure or a defect caused in a power supply wiring without using an expensive uninterruptible power supply facility

Art Unit: 2616

Regarding claims 17, 22, 26-29, *Cole* discloses a central network device for use in a power integrated local area network, the central network device comprising:

networking logic, configured to communicate with a plurality of member network devices a plurality of combined power/data links (links 30-34, see figure 2; and nodes 20, see figures 1 and 3; and col. 3 lines 45-55); and

a power source means for providing power to at least one selected member network device, the selected member network device being capable of accepting power over the power integrated local area network (Vs see figure 1 or power supply 16, see figure 3).

Cole fails to explicitly discloses the power source is electrochemical source i.e. battery power source.

Kamioka, on the other hand, discloses a hub for a local area network according to one embodiment of the present invention includes a plurality of communication ports connected to each of nodes in the network, through which a signal is transmitted among the nodes, a signal processing circuit having at least the functions of repeating the signal among the nodes and reshaping a waveform thereof, and a power supply circuit for supplying a dc current for driving the signal processing circuit. The power supply circuit further comprises an ac/dc converter for converting an ac current applied from an external ac power supply without passing through a power switch thereto into a predetermined dc current and supplying the dc current to a load circuit including the signal processing circuit without passing through a power switch, a backup secondary battery, a charging circuit for trickle charging the dc current output from the ac/dc

Art Unit: 2616

converter into the backup secondary battery, and a control circuit for opening and closing a current path for supplying an output current of the backup secondary battery to the load circuit (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made supply the teaching of *Kamioka* especially backup battery power supply in the system taught by *Cole* for providing a hub equipped with a backup power supply function using a secondary battery which becomes activated immediately after the hub is connected to a network system such as a LAN; and providing the hub which is able to avoid breakdown of a whole network system in case of power failure or a defect caused in a power supply wiring without using an expensive uninterruptible power supply facility

Regarding claim 18, *Cole* discloses the power integrated local area network is configured to execute the Ethernet protocol (see col. 2 lines 37-44).

Regarding claim 19, *Cole* discloses the networking logic is chosen form the group consisting of a switch, a hub, a router, and a multiplexer (see col. 3 lines 12-23).

Regarding claim 20, *Cole* discloses the power integrated local area network is configured to operate according to a Power Ethernet Standard (see col. 2 lines 37-44).

Art Unit: 2616

Regarding claim 23, *Cole* discloses power rectification circuitry (Voltage regulator 14 in figure 2 or Power supply 16 in figure 3, see col. 3 lines 39-55).

Regarding claims 24-25, *Cole* inherently discloses the central network device further comprising an AC to DC converter or DC to AC converter (see col. 2 line 65 to col. 3 line 5).

Regarding claim 30, *Cole* discloses the plurality of member network devices comprises a network appliance (see col. 3 lines 5-11).

Regarding claim 31, *Cole* discloses a central network device, wherein the network appliance comprises (remote node 20, see figures 1 and 5):

a peripheral device configured to transmit data to the power integrated local area network (see figures 1 and 5);

a communication engine operably coupled with the peripheral device, the communication engine configured to control data transmission via the power integrated local area network; and

an appliance network interface operably coupled with the communication engine, the appliance network interface being configured to transmit data to and to receive data from the power integrated local area network, data transfer between the peripheral device and the power integrated local area network being forwarded via the appliance network interface (see col. 3 lines 5-11).

Art Unit: 2616

Regarding claims 32, 37, 40-43, *Cole* discloses a method for powering a local area network using power from a central network device, the method comprising:

selecting at least one member network device capable of accepting power over the local area network (see figures 1 and 3); and

providing power, from energy stored by an power source, to the at least one selected member network device the combined power/data link (the communication link 30 is an Ethernet 10Base-T line, see col. 2 lines 36-44, and comprising lines 40, 42, and 44, see figure 1 and col. 2 lines 16-36, wherein the link 30 is used for delivering both data or power to the selected nodes, see col. 2 lines 37-44, see col. 3 lines 45-55).

Cole fails to explicitly discloses the power source is electrochemical source i.e. battery power source.

Kamioka, on the other hand, discloses a hub for a local area network according to one embodiment of the present invention includes a plurality of communication ports connected to each of nodes in the network, through which a signal is transmitted among the nodes, a signal processing circuit having at least the functions of repeating the signal among the nodes and reshaping a waveform thereof, and a power supply circuit for supplying a dc current for driving the signal processing circuit. The power supply circuit further comprises an ac/dc converter for converting an ac current applied from an external ac power supply without passing through a power switch thereto into a predetermined dc current and supplying the dc current to a load circuit including the

signal processing circuit without passing through a power switch, <u>a backup secondary</u>

<u>battery</u>, <u>a charging circuit for trickle charging the dc current output from the ac/dc</u>

<u>converter into the backup secondary battery</u>, <u>and a control circuit for opening and</u>

<u>closing a current path for supplying an output current of the backup secondary battery to</u>

<u>the load circuit</u> (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made supply the teaching of *Kamioka* especially backup battery power supply in the system taught by *Cole* for providing a hub equipped with a backup power supply function using a secondary battery which becomes activated immediately after the hub is connected to a network system such as a LAN; and providing the hub which is able to avoid breakdown of a whole network system in case of power failure or a defect caused in a power supply wiring without using an expensive uninterruptible power supply facility

Regarding claim 33, *Cole* discloses executing the Ethernet protocol on the local area network (see col. 2 lines 37-44).

Regarding claim 34, *Cole* discloses the housing the electrochemical power source in a common enclosure with networking logic chosen from the group consisting of a switch, a hub, a

router, and a multiplexer (see col. 3 lines 12-23).

Art Unit: 2616

Regarding claim 35, *Cole* discloses operating the local area network according to a Power Ethernet Standard (see col. 2 lines 37-44).

Regarding claims 38-39, *Cole* inherently discloses the central network device further comprising an AC to DC converter or DC to AC converter (see col. 2 line 65 to col. 3 line 5).

Regarding claim 44, *Cole* discloses delivering power from the electrochemical power source to a network appliance (see col. 3 lines 5-11).

Regarding claim 45, *Cole* discloses the network appliance comprises (remote node 20, see figures 1 and 5):

a peripheral device configured to transmit data to the power integrated local area network (see figures 1 and 5);

a communication engine operably coupled with the peripheral device, the communication engine configured to control data transmission via the power integrated local area network; and

an appliance network interface operably coupled with the communication engine, the appliance network interface being configured to transmit data to and to receive data from the power integrated local area network, data transfer between the peripheral device and the power integrated local area network being forwarded via the appliance network interface (see col. 3 lines 5-11).

Art Unit: 2616

Regarding claim 46, *Cole* discloses a central network device for use in a power integrated local area network, the central network device comprising:

a housing;

networking logic, enclosed by the housing, configured to communicate with a plurality of member network devices (switching circuit 18 and microprocessor 22, see figure 4);

an power source, sharing the housing with the networking logic, for storing energy to provide power for the member network devices (see power supply 16, figure 3; and switching circuit 18, figure 4); and

rectification circuitry, sharing the housing with the networking logic and the power source(voltage regulator 14, figure 2; power supply 16, figure 3);

wherein the power integrated local area network is configured to execute the Ethernet protocol(see col. 2 lines 36-44).

Cole fails to explicitly discloses the power source is electrochemical source i.e. battery power source.

Kamioka, on the other hand, discloses a hub for a local area network according to one embodiment of the present invention includes a plurality of communication ports connected to each of nodes in the network, through which a signal is transmitted among the nodes, a signal processing circuit having at least the functions of repeating the signal among the nodes and reshaping a waveform thereof, and a power supply circuit for supplying a dc current for driving the signal processing circuit. The power supply

Art Unit: 2616

circuit further comprises an ac/dc converter for converting an ac current applied from an external ac power supply without passing through a power switch thereto into a predetermined dc current and supplying the dc current to a load circuit including the signal processing circuit without passing through a power switch, a backup secondary battery, a charging circuit for trickle charging the dc current output from the ac/dc converter into the backup secondary battery, and a control circuit for opening and closing a current path for supplying an output current of the backup secondary battery to the load circuit (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made supply the teaching of *Kamioka* especially backup battery power supply in the system taught by *Cole* for providing a hub equipped with a backup power supply function using a secondary battery which becomes activated immediately after the hub is connected to a network system such as a LAN; and providing the hub which is able to avoid breakdown of a whole network system in case of power failure or a defect caused in a power supply wiring without using an expensive uninterruptible power supply facility

Regarding claim 47, *Cole* discloses a method for powering a local area network using power from a central network device, the method comprising:

housing an power source in a common enclosure with

Art Unit: 2616

networking logic configured to communicate with a plurality of member network devices via a plurality of combined power/data links (links 30-34, see figure 2; see power supply 16, figure 3; and switching circuit 18, figure 4);

rectifying primary power that is delivered to the central network device, to charge the power source (voltage regulator 14, figure 2; power supply 16, figure 3);

delivering power stored by the electrochemical power source to at least one of the plurality of member network devices (see col. 3 lines 45-55); and executing the Ethernet protocol on the local area network (see col. 2 lines 36-44).

Cole fails to explicitly discloses the power source is electrochemical source i.e.

battery power source.

Kamioka, on the other hand, discloses a hub for a local area network according to one embodiment of the present invention includes a plurality of communication ports connected to each of nodes in the network, through which a signal is transmitted among the nodes, a signal processing circuit having at least the functions of repeating the signal among the nodes and reshaping a waveform thereof, and a power supply circuit for supplying a dc current for driving the signal processing circuit. The power supply circuit further comprises an ac/dc converter for converting an ac current applied from an external ac power supply without passing through a power switch thereto into a predetermined dc current and supplying the dc current to a load circuit including the signal processing circuit without passing through a power switch, a backup secondary battery, a charging circuit for trickle charging the dc current output from the ac/dc converter into the backup secondary battery, and a control circuit for opening and

closing a current path for supplying an output current of the backup secondary battery to the load circuit (see abstract).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made supply the teaching of *Kamioka* especially backup battery power supply in the system taught by *Cole* for providing a hub equipped with a backup power supply function using a secondary battery which becomes activated immediately after the hub is connected to a network system such as a LAN; and providing the hub which is able to avoid breakdown of a whole network system in case of power failure or a defect caused in a power supply wiring without using an expensive uninterruptible power supply facility

Claims 5, 21, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of *Cole-Kamioka* as applied to claims 4, 20, 35 in view of *Hutchison* et al (US 5,838,989), hereinafter *Hutchison*.

Regarding claims 5, 21, 36, the combination of *Cole-Kamioka* fails to disclose the central network device being configured to deliver power and data through an MDI-X compliant port.

Hutchison, on the other hand, discloses media dependent interface (MDI-X) is widely used in Ethernet or 10Base-T network (see col. 8 lines 31-46).

Art Unit: 2616

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made provides the teaching of *Hutchison* in the system taught by the combination of *Cole-Kamioka* in order to comply with the standard.

# Response to Arguments

Applicant's arguments filed 4/14/2006 have been fully considered but they are not persuasive.

In response to the applicant in page 10, the Cole disclose the communication link 30 is an Ethernet 10Base-T line (see col. 2 lines 36-44) and comprising lines 40, 42, and 44 (see figure 1 and col. 2 lines 16-36). Cole further discloses that the link 30 is used for delivering both data or power to the selected nodes (see col. 2 lines 37-44).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine the references is discloses in col. 2 lines 26-46 of Kamioka.

Application/Control Number: 09/752,152 Page 19

Art Unit: 2616

In response to the applicant's argument in page 13-15, the Cole disclose the communication link 30 is an Ethernet 10Base-T line (see col. 2 lines 36-44) and comprising lines 40, 42, and 44 (see figure 1 and col. 2 lines 16-36), and the link 30 is used for delivering both data or power to the selected nodes (see col. 2 lines 37-44).

### Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

# Any response to this action should be mailed to:

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Art Unit: 2616

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Bob A. Phunkulh** whose telephone number is **(571) 272-3083.** The examiner can normally be reached on Monday-Tursday from 8:00 A.M. to 5:00 P.M. (first week of the bi-week) and Monday-Friday (for second week of the bi-week).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor **Wellington Chin**, can be reach on **(571) 272-3134**. The fax phone number for this group is **(571) 273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Page 21

Bob A. Phunkulh

Primary Examiner *TC 2600* 

Technology Division 2616

June 21, 2006

BOB PHUNKULH PRIMARY EXAMINER